

IN THE CLAIMS

Claim 1 (Currently Amended). A self-expanding stent and stent delivery system comprising:

an elongated core member having proximal and distal portions including a proximal cylindrical member disposed at the distal portion of said elongated core member, and a distal cylindrical member disposed at the distal portion of said elongated core member and positioned distally of said proximal cylindrical member and being spaced apart from said proximal cylindrical member to define a gap having a predetermined length;

a self-expanding stent having a proximal end which is distal to said proximal cylindrical member, said self-expanding stent being comprised of a small diameter skeletal tubular member having an outer cylindrical surface which defines a thin wall, said wall of said skeletal tubular member including a plurality of cells which are formed by a plurality of interconnected strut members, and an anchor member placed on one of said plurality of strut members ~~and~~ at said proximal end of said stent and having a length less than the length of the gap between the proximal cylindrical member and the distal cylindrical member, and said self-expanding stent being mounted and compressed onto said elongated core member such that said anchor member ~~and~~ at said proximal end of said stent is interlocked within said gap and between said proximal cylindrical member and said distal cylindrical member to thereby retain said stent on said elongated core member; and

an actuatable retaining ring is disposed around the outer cylindrical surface of said self-expanding stent at said anchor member for retaining said stent onto said elongated core member in a compressed state and said anchor member in said gap, for upon actuation, releasing said self-expanding stent to permit said anchor member to move toward the wall of a vessel and the stent to expand against the wall of the vessel and to permit the actuated retaining ring to be removed from the released stent.

Claim 2 (Original). A self-expanding stent and stent delivery system as defined in Claim 1, wherein said self-expanding stent has proximal and distal portions, and said actuatable retaining ring is disposed around the proximal portion of said stent.

Claim 3 (Original). A self-expanding stent and stent delivery system as defined in Claim 1, wherein said self-expanding stent has proximal and distal sections, and a first actuatable retaining ring is disposed around the distal portion of the stent and a second actuatable retaining ring is disposed around the proximal portion of the stent.

Claim 4 (Original). A self-expanding stent and stent delivery system as defined in Claim 1, wherein said actuatable retaining ring is formed of a material which when heated permits the compressed self-expanding stent to expand into contact with the wall of the vessel.

Claim 5 (Original). A self-expanding stent and stent delivery system as defined in Claim 4, including a heating element positioned in proximity to said actuatable retaining ring, and electrical conductors connected to said heating element for, upon being energized, causing the temperature of said heating element to increase thereby causing the temperature of the actuatable retaining ring to increase with the result that the actuatable retaining ring yields to permit the stent to expand against the wall of a vessel.

Claim 6 (Original). A self-expanding stent and stent delivery system as defined in Claim 5, in which the actuatable retaining ring is comprised of a polymeric material.

Claim 7 (Original). A self-expanding stent and stent delivery system as defined in Claim 5, in which the actuatable retaining ring takes the form of a polymeric filament.

Claim 8 (Original). A self-expanding stent and stent delivery system as defined in Claim 5, in which the actuatable retaining ring is comprised of a filament formed from a hot melt polymer.

Claim 9 (Original). A self-expanding stent and stent delivery system as defined in Claim 5, in which the heating element is an electrical resistive heating element.

Claims 10-20 (Cancelled).

Claim 21. (Previously Presented) The self-expanding stent and stent delivery system as defined in Claim 1, wherein the actuatable retaining ring is coupled to said elongated core member and upon actuation is removable with the elongated core member.

Claim 22. (New) A self-expanding stent and stent delivery system as defined in Claim 1, wherein said actuatable retaining ring is disposed around said anchor member at said proximal end of said stent.

Claim 23. (New) A self-expanding stent and stent delivery system as defined in Claim 1, wherein a first actuatable retaining ring is disposed around an anchor member at a distal end of the stent and a second actuatable retaining ring is disposed around said anchor member at said proximal end of the stent.

Claim 24. (New) A self-expanding stent and stent delivery system as defined in Claim 1, wherein at least one of said proximal and distal cylindrical member comprise a helical coil.

Claim 25. (New) A self-expanding stent and stent delivery system as defined in Claim 24, wherein both said proximal and distal cylindrical members comprise a helical coil.

Claim 26. (New) A self-expanding stent and stent delivery system as defined in Claim 1, wherein said anchor member comprises a coil on the interconnected strut members at an end of said stent.

Claim 27. (New) A self-expanding stent and stent delivery system as defined in Claim 26, wherein said coil is radiopaque.